

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**LISTING OF CLAIMS:**

1-11. (Canceled)

12. (Original) A current generator providing an output current comprising:

an input mirror having a first current source, a second current source, a first transistor, and a second transistor, the first current source being a variable input current source, the first transistor outputting a first mirror current source of the variable current source limited by the first current source, and the second transistor outputting a second mirror current source of the variable current source limited by the second current source;

a first current limiter having a third current source and one or more transistors, the first current limiter coupled to the first transistor of the input mirror and having a third transistor outputting a first current output substantially equivalent to the variable input current source limited by the third current source;

a second current limiter having a fourth current source and one or more transistors, the second current limiter coupled to the second transistor of the input mirror and having a fourth transistor outputting a second current substantially equivalent to the first current source limited by the second current source; and

a node coupled to the first current limiter and the second current limiter wherein the output current is the sum of the first current and the second current.

13. (Original) The current generator of claim 12 wherein the second current source is substantially equivalent to the third current source.

14. (Original) The current generator of claim 12 wherein the current generator is coupled to a power amplifier driver.

15. (Original) The current generator of claim 14 wherein an offset is added to the output of the current generator.

16. (Original) The current generator of claim 12 wherein the second and third current sources generate substantially equal currents and are less than the fourth current source.

17. (Original) The current generator of claim 12 wherein the second and third current sources generate substantially equal currents and are greater than the fourth current source.

18. (Original) The current generator of claim 12 wherein the second current source is programmable.

19. (Original) The current generator of claim 12 wherein the third current source is programmable.

20. (Original) The current generator of claim 12 wherein the fourth current source is programmable.

21. (Original) A current generator providing an output current comprising:  
an input circuit having a first current source, a second current source, a first transistor, and a second transistor, the input circuit coupled to a positive input voltage and a voltage feedback, current flowing through the first transistor changing exponentially in inverse relation

to the positive input voltage and limited by the second current source;

the first current source being a variable current source and the second current source being a constant current source, the first transistor and the second transistor outputting a mirror current of the variable current source with respect to the second current source;

a first current limiter having a third constant current source and one or more transistors, the first current limiter coupled to the first transistor of the input mirror and having a third transistor outputting a first current output substantially equivalent to the variable input current source clipped at the current level defined by the second constant current source;

a second current limiter having a third constant current source and one or more transistors, the first current limiter coupled to the first transistor of the input mirror and having a third transistor outputting a first current output substantially equivalent to the variable input current source clipped at the current level defined by the second constant current source; and

a node coupled to the output of the first current limiter and the output of the second current limiter, outputting a linear-in-dB current.

22. (Original) The current generator of claim 21 wherein the second current source is substantially equivalent to the third current source.

23. (Original) The current generator of claim 21 wherein the current generator is coupled to a power amplifier driver.

24. (Original) The current generator of claim 23 wherein an offset is added to the output of the current generator.

25. (Original) The current generator of claim 21 wherein the second and third current sources generate substantially equal currents and are less than the fourth current source.

26. (Original) The current generator of claim 21 wherein the second and third current sources generate substantially equal currents and are greater than the fourth current source.

27. (Original) The current generator of claim 21 wherein the second current source is programmable.

28. (Original) The current generator of claim 21 wherein the third current source is programmable.

29. (Original) The current generator of claim 21 wherein the fourth current source is programmable.

30-39. (Canceled).